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9 OCCUPATIONAL SURVEY REPORT. ELECTRONIC PRINCIPLES

AD A 046095



AVIONIC INERTIAL AND RADAR NAVIGATION
SYSTEMS SPECIALIST

AFSC 32854.

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OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB TEXAS 78236

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PREFACE

This report presents a summary of the results of a detailed Air Force Electronic Principles Survey of the Avionic Inertial and Radar Navigation Systems Specialist, AFSC 32854.

The Electronic Principles Inventory (EPI) was developed by Major Thomas J. O'Connor and Mr. Hendrick W. Ruck and the survey data were analyzed by Captain Elena J. Weber. All are members of the Occupational Survey Branch, USAF Occupational Measurement Center, Lackland AFB, Texas.

Computer programs for analyzing the data were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

Distribution of this report is made upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Survey Branch (OMY), Lackland AFB, Texas 78236.

This report has been reviewed and is approved.

JAMES A. TURNER, JR., Colonel, USAF Commander USAF Occupational Measurement Center

WALTER E. DRISKILL, Ph.b. Chief, Occupational Survey Branch USAF Occupational Measurement Center

ELECTRONIC PRINCIPLES OCCUPATIONAL SURVEY REPORT AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALIST AFSC 32854

INTRODUCTION

This report summarizes the results of the administration of the Electronic Principles Inventory to airmen assigned as Avionic Inertial and Radar Navigation Systems Specialist (AFSC 32854). The data for this report were collected during the period April through June 1977.

This report describes: (1) development and administration of the survey instrument; and (2) electronic principles used by DAFSC 5-skill level personnel both CONUS and overseas and assigned to selected major commands.

DEVELOPMENT OF THE ELECTRONIC PRINCIPLES INVENTORY (EPI)

The EPI was developed by personnel from the Occupational Survey Branch who were well qualified in theoretical physics and electronics, as well as in task analysis and survey development. Over 300 maintenance personnel from SAC, TAC, ADC, MAC, and AFCS participated in the development of the inventory. Representing the five ATC training centers, electronics experts who averaged 12 years of maintenance experience and four years of electronic principles instruction experience spent several weeks refining the EPI. In addition, personnel at the Electrical Engineering Department of the USAF Academy and the Air Force Human Resources Laboratory were consulted during the development of the inventory.

The final version of the EPI used in this survey contained 1,257 items in 62 subject matter areas covering all electronic principles training given at the five ATC technical training centers. Table 1 lists the 62 subject areas.

ADMINISTRATION

The Electronic Principles Inventory was administered by mail to AFSC 32854 airmen worldwide. Responses from 220 individuals represented 19 percent of the total of all AFSC 32854 personnel. Table 2 shows the percentage distribution by major command of the survey incumbents.

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TABLE 1
EPI SUBJECT AREAS

SEQUENCE OF SUBJECT AREAS	SUBJECT AREA TITLE	BEGINNING ITEM NUMBER	GPSUM PAGE NUMBER
1	MATHEMATICS	A1	2
2	DIRECT CURRENT AND VOLTAGE	A15	2 2 2 3
3	RESISTANCE	A24	2
2 3 4	MULTIMETER USES	B52	3
5	ALTERNATING CURRENT	B61	4
6	INDUCTORS AND INDUCTIVE	B67	
	REACTANCE		4
7	CAPACITORS AND CAPACITIVE	C92	
	REACTANCE		5
8	TRANSFORMERS	C128	6
9	MAGNETISM	C171	7
10	RCL CIRCUITS	D185	8
11	SERIES AND PARALLEL RESONANCE	D229	
	(TIME CONSTANTS)		10
12	FILTERS	D239	10
13	COUPLING	E261	11
14	SOLDERING	E273	11
15	RELAYS	E295	12
16	MICROPHONES	F314	12
17	SPEAKERS	F327	13
18	OSCILLOSCOPES	F342	13
19	SEMICONDUCTOR DIODES	G354	13
20	TRANSISTORS	G404	15
21	TRANSISTOR AMPLIFIERS	G428	16
22	SOLID-STATE SPECIAL PURPOSE		
	DEVICES	H477	19
23	POWER SUPPLIES	H483	19
24	OSCILLATORS	H512	19
25	MULTIVIBRATORS	1539	20
26	LIMITERS AND CLAMPERS	1555	21
27	ELECTRON TUBES	1565	21
28	ELECTRON TUBE AMPLIFIERS AND CIRCUITS	J609	22
29	SPECIAL PURPOSE ELECTRON TUBES	J616	23
30	HETERODYNING, MODULATION, AND	J632	
	DEMODULATION		23
31	AM SYSTEMS	K638	23
32	FM SYSTEMS	K666	24

TABLE 1 (CONTINUED) EPI SUBJECT AREAS

SEQUENCE OF		BEGINNING ITEM	GPSUM
SUBJECT AREAS	SUBJECT AREA TITLE	NUMBER	PAGE NUMBER
22	NUMBERING SYSTEMS LOGIC FUNCTIONS BOOLEAN EQUATIONS COUNTERS	W605	0.5
33	NUMBERING SYSTEMS	K685	25
34	LOGIC FUNCTIONS	L695	25
35	BOOLEAN EQUATIONS	L708	26
36		L733	27
37	TIMING CIRCUITS	M757	27
38	USE_OF SIGNAL GENERATORS	M769	28
39	MOTORS AND GENERATORS	M779	28
40	METER MOVEMENTS	N808	29
41	SATURABLE REACTORS AND	N818	
	MAGNETIC AMPLIFIERS		29
42	WAVESHAPING CIRCUITS	N834	30
43	SINGLE SIDEBAND SYSTEMS	0845	30
44	PULSE MODULATION SYSTEMS	0875	31
45	ANTENNAS	0914	32
46	TRANSMISSION LINES	P953	34
47	WAVEGUIDES AND CAVITY	P984	
	RESONATORS		35
48	MICROWAVE AMPLIFIERS AND	P1034	
	OSCILLATORS		37
49	REGISTERS	Q1110	39
50	STORAGE DEVICES	Q1117	40
51	DIGITAL TO ANALOG CONVERTERS	01126	40
52	PHANTASTRONS	Q1140	41
53	CCUMITT TRICCERS	R1141	41
54	CABLE FABRICATION INPUT/OUTPUT DEVICES	R1144	41
55	INDUIT/OUTPUT DEVICES	\$1146	41
56	PHOTO SENSITIVE DEVICES	\$1149	41
57	SYNCHRONOUS VIBRATIONS	\$1150	The Links of Burer C
37	(CHOPPER CIRCUITS)	31130	41
58	INFRARED	T1159	41
59	기계 이 경기를 가는 것이 살아들어 되었다. 이 그리고 있는 사람들이 되었다. 이 이 사람들이 되었다. 그리고 있다고 있다.	T1186	42
60	LASERS DISPLAY TUBES PROGRAMMING	T1220	43
	DDOCDAMATAC		
61	r Koukarii 1114a	U1234	43
62	DB AND POWER RATIOS	U1255	44

TABLE 2

COMMAND REPRESENTATION OF SURVEY SAMPLE

	32	2854
COMMAND	PERCENT ASSIGNED	PERCENT OF SAMPLE
ADCOM	1	2
ATC	2	1
MAC	29	31
SAC	18	20
AFSC	2	1
TAC	27	24
USAFE	13	13
PACAF	7	7
OTHER	<u>11</u> com an	_1
TOTAL	100	100

Total Assigned - 1150 Total Sampled - 220 Percent Sampled - 19%

PRESENTATON OF RESULTS

Personnel responded "yes" or "no" to the 1,257 electronic principles questions as related to their present job. A Group Summary (GPSUM) computer printout is provided in the Appendix portion of this report. Page I of the GPSUM lists the seven selected groups identified for this report. Pages 2-44 show the percentage of the incumbents responding to the EPI items. The computer program results display the percent members answering "yes" to the subject area questions. The reader can locate a specific subject area by referring to the Appendix page number as listed in Table I. For example, the Transformers area results are given on page 6 of the GPSUM. The percentage of survey respondents indicating use of specific electronic principles ranged from high in areas such as Oscilloscopes (p. 13) and Power Supplies (p. 19) to low in areas such as Microphones (p. 12) and Speakers (p. 13). Additional AFSC 328X4 data can be obtained upon request to the Chief, Occupational Survey Branch (OMY).

APPENDIX

PCT MBRS RESPONDING .YES' BY SELECTED GRPS

TABULATION OF ELECTRONIC PRINCIPLES UTILIZATION DATA FOR SELECTED GHOUPS IN THE 32054 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

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GPSUMP PAGE 2

TASK GROUP SUNNARY PERCENT MENBERS PERFORMING

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PCT MBRS RESPONDING TYEST BY SELECTED GRPS

GPSUNG PAGE 4

TASK GROUP SUNMARY PERCENT MEMBERS PERFORMING

CAPACITORS AND CAPACITIVE REACTANCE

TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING

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PCT MBRS RESPONDING TEST BY SELECTED GRPS

6PSUNP PAGE 6

124. Graup Survary									
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TRANSFORMERS

PET HORS RESPONDING .VES. BY SELECTED GRPS

GPSUNT PAGE

TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING

200	PACIFICATION PROTOCOLOGICAL									
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173	USE OR REFER TO RETENTIVITY	13	-	-	•	:=	. •		MAGNETISM	
17.	CA-DO YOU USE OR REFER TO RELUCTANCE OF MACHETIC	10	~	'n	•	•	•	^		
175	MATERIALS C3-05 DO YOU USE OF REFER TO PERMEABILITY OF MAGNETIC	0.1	7	•	5	•	•	^		
17.	DO YOU USE OF REFER TO RESIDUAL MAGNETIS!	0	2	s	9	•	•	-		
111	C3-07 DO YOU USE OR REFER TO MAGNETIC LIMES OF FORCE OR FLUX	*	*	56	97	•	*.	2,1		
17.	C3-DB DO TOU USE OR REFER TO MEBER'S THEORY OF MASKETISM	•	•	-	10	0	•	0		

PCT MBAS RESPONDING TEST BY SELECTED GRPS
TASK GROUP SURMARY
PERCENT MEMBERS PERFORMING

GPSUMP PAGE 8

											RCL CIRCUITS																							
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245		-	-	•		-		•		~	-	•			7	~			-	•		-	-		•	•		~	•	•		~	-	
DY-TSK	170 C3-00 Do You Use on ofere To		181 C3-11 DO YOU USE OR REFER TO	182 C3-12 DO YOU USE OR REFER TO	MAGNETIC POLES, LI	USE THE LEFT HAND THUMB RULE TO	TO NOTICE OF THE PARTY OF THE P	THE REAL PROPERTY.	8	DI 184 DI-02 DO YOU USE OR REFER TO VECTORS WHEN MORKING MITH RCL	D 187 DI-DE DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN	D 108 DI-G4 DO YOU USE OR REFER TO SINE WHEN MORKING MITH RCL	CIRCUITS	CIRCUITS	O 190 DI-06 DO TOU USE OR REFER TO TANGENT WHEN WORKING MITH RCL	D 191 D1-07 DO TOU USE OR REPER TO MATTS WHEN MORKING MITH NEC.	CIRCUITS CIACO DO YOU USE OR RESER TO TRUE POUER (PT) MAKE LORKING	WITH RCL CIRCUITS	0 350 00	MORKING MITH ACL CIRCUITS 194 DI-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN	MORKING WITH RCL	D 195 DI-11 DO YOU USE OR REFER TO APPARENT POWER (PA) MAEN	0 350 004 0	WITH RCL CIRCUIT	MORRING WITH BC CIRCUITS	TOU USE O	RCL CIRCUITS	D 199 DI-15 DO YOU USE OR REFER TO SELECTIVITY WHEN MORKING WITH BC. CIRCUITS	0 350	MORKING WITH RCL		00 YOU USE 0	SOS DI-19 DO YOU USE OR REFER TO CIRCUIT O WHEN WORKING WITH	BCL (

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GPSUNT PAGE

TASK GROUP SUMMARY PERCENT HENDERS PERFORMING

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204 DI-20 DO TOU USE OR REFER TO TANK CINCUITS WHEN WORKING WITH RCL CIRCUITS 205 DI-21 DO TOU OFTERMINE VALUES OF TRIGONOMETRIC FUNCTIONS	222	207 01-23 DO YOU CALCOLATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS CIRCUITS TO YOU CALCOLATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIPCUITS	209 01-25 00 YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS 210 01-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL	212 D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES ACL CIRCUITS 213 D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL	214 DI-30 DO TOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS	215 DI-31 DO TOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL. CIRCUITS	216 DI-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL ACL CIRCUITS USING THE ASSUMED VOLTAGE METHOD	CINCUITS USING ON	01-34 00 70U CHECK	220 DI=34 DO TOU CHECK INDUCTORS USING OMMMETERS 221 DI=37 DO YOU CHECK INDUCTORS USING SUBSTITUTION	223 DI-39 DO TOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS	224 DI-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT FREQUENCY FOR SERIES RCL CIRCUITS	225 DI-41 DD 700 USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT RESONANT FREQUENCY FOR PARALLEL RCL CIRCUITS	224 DI-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK CURRENT VALUE		226 DI-44 DO YOU DETERMINE MOM CHANGES IN FREQUENCY, RESISTANCE. OF APACITANCE, OR INDUCTANCE WILL AFFECT CURRENT OR PHASE ANGLES FOR SCHOOL CIRCUIT.

GPSUNT PAGE 10

TASK GROUP SURMARY PERCENT MEMBERS PERFORMING

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	SPC 176	*.	**	*	*	*	30	*	\$ 2		•	-	-	•	200		*		11	•	•	•		6	•	54
TASK GROUP SURMARY PERCENT MEMBERS PERFORMING	0r-73k	259 D3-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT 240 D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC PLITTERS	3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	**	:	245 E1-05 DO YOU TROUBLESMOOT CIRCUITS MAICH MAVE CONFONENTS	311 2	3 / 52	366	STIDUE OF THE PROPERTY OF THE	270 11-10	27. 61-11		274 E2-02	275 E2-03 DO YOU ADD FLUX TO CONVECTIONS	277 £2-05 00 700	278 E2-06 DO YOU CONNECT OR DISCONNECT	£2-00 00 100	E2-09 DO 70U FILE OR SHAPE	282 EZ-10 DO TOU LIN SOLDERING IRON TIPS	£2-12 DO YOU	£2-13 00 70U	207 E2-15 DO YOU DESCLOEP CONNECTIONS AY WICKING	E2-16 DO YOU DESOLUER CONNECTIONS	289 £2-17 00 700	290 E2-10 DO 10U
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SPSUNG PAGE

PET HORS RESPONDING .YES. BY SELECTED GRPS

TOUR PRESENT JOB. DO YOU PEHFORM SOLDERING		24 56 65	51		90	96 56	:	63		
INES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS	N.S.									
TOU SELECT TYPE OF SOLDER TO USE		69	29	73	7.2	75	65	09		
YOU ADD FLUX TO CONNECTIONS		04		85	97	96			SOLDERING	
YOU CLEAN CONNECTIONS USING SOLVENTS		• •		7.2	81	82	1.	0.		
TOU STRIP INSULATION FROM WIRES		:	11	93	* 6	8	00	93		
TOU CONNECT OR DISCONNECT HEAT SINKS		*		78	87	6		67		
TOU BEND OR SMAPE WIRES OR LEADS		50	14	42	93		96	6		
TOU CUT WIRES		9.		63		*	00			
TOU FILE OR SMAPE SOLDERING IRON TIPS		11	21		7.1	90	87			
TOU TIN SOLDERING IRON TIPS		:		60	63		00			
TOU CLEAN SOLDERING IRON TIPS		•	:	:	:		00			
YOU CLEAN ELECTRICAL SURFACES USING ERASERS		=	9.5	90	9.0		**			
TOU TIN OR PRE-TIN CONDUCTORS		04	:	:		:	:	70		
TOU INSPECT SOLDERED CONNECTIONS		:	:		43		:	00		
TOU DESOLDER CONNECTIONS BY WICKING			3	29	9	70	45	+		
YOU DESOLUER CONNECTIONS USING VACUUM DESOLDERING		5 8	*			:	0.0	0.0		
TOU CUT COMPONENT LEADS TO REMOVE COMPONENTS		9 9	:	:	7.2	0.0	*	53		
TOTAL OF THE PARTY										

Pet ners responding over av selected Gaps

SPSUMP PAGE 12

TASK GROUP SUMMANY PERCORNING

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	07-TSK	241 £2-19 Do You	£2-20 00	243 £2-21 00 YOU	CAPACITORS ON PRINTED CIRCUIT BOARDS	E 294 E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE		 20-02 00 100	200 00 100	E3-04 DO TOU INSPECT RELATS	E3-05 DO TOU REMOVE OR REPLACE COMPLETE	E3-04 DO TOU REMOVE OR REPLACE	DO YOU TROUBLESHOOT RELA	E3-08 DO TOU STRAIGHTEN RELAT CONTAC	E3-09 DO YOU PERFORM TASKS ON RELAY	PERFORM TASKS ON RELAY	PERFORM TASKS ON RELAT	E3-12 DO YOU PERFORM TASKS ON RELAY	E 307 E3-13 DO YOU PERFORM TASKS ON RELAT SPRINGS	TOU USE OR REFER TO S	(SPST), NORMALLY OPER (NO! SC	YOU USE OR REFER TO S	(SPST), NORMALLY CLOSED (NC)	10 \$	(SPDT) SCHEHATIC STHBOLS	200	CONTRACTOR STATEMENT OF STATEME		E 313 E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY	HEASURING RESISTANCE	F 314 F1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING	WITH MICROPHONES	315 FI-02 DO TOU	F1-03 DO 100	1-04 00 40-14	TOTAL TOTAL TOTAL TOTAL TOTAL TARENT TOTAL	PARTS OR MICROPHONES	DO YOU TROUBLESHOOT DOWN	FI-OT DO YOU REHOVE OR REPLACE	TOU REHOVE OR REPLACE	FI-09 DO TOU PERFORM TASKS ON	F1-10 DO YOU PERFORM TASKS ON	FI-11 DO YOU PERFORM TASKS ON CRYSTAL	FI-IZ DO TOU PERFORM TASKS ON	F 326 FI-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES

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CPSUMP PAGE 13

TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING

		SPEAKERS																	330030111330	OSCILLOSCOPES																SEMICONDUCTOR	DIODES					
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0Y-18K		WITH SPEAKERS	F 328 F2-03 DO YOU CLEAN SPEAKERS	F2-04 DO TOU	F2-05 00 YOU	0	PARTS OF SPEAKERS	TOO TOO THOU THOU THE PROPERTY OF THE PROPERTY	TOTAL OF TOTAL OF METLACE	FZ-08 DO TOU REMOVE ON REPLACE SPEAKEN PAN	TO SAST THE MAN TENTON OF THE PARTY OF THE P	PERSON ANY TASKS ON SPEAKER	מינים של היינים ביינים	F2-13 DO YOU PERFORM ANY	F2-14 On YOU PERFORM ANY TAKES ON SPEAKER	F2-15 DO YOU PERFORM ANY TASKS ON SPEAKER	FISCH DO YOU USE OSCILIOSCOPES IN YOUR PRESENT	F3-02 DO YOU USE OSCILLOSCOPES TO	CHECKS	F 344 F3-03 DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR	ADJUSTHENTS	1 345 F3-04 DO TOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC	CIRCUITS	THE SAME TO THE USE USCILLOSCOPES TO MEASURE THEOLOGY	ביים אים היים מילורות מביים ביים מילורות מביים	Flack on You Use Oscilloscopes to Observe	UTILIZING ATTENUATOR PROBES	SIGO	IENTS USING DELAY TINE	F3-10 DO YOU USE OSCILLOSCOPES	YOU USE OSCILLOSCOPES	SIGNALS AFTER FIRST ADJUSTING		DO TOO TORK SITH SEMICOMPOLION DIGGES	Z 00 YOU	356 61-03 00	61-04 DO YOU CHECK DIODES	350 61-05 DO YOU	010068	6 359 61-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES,	TE FORMARD OR REVERSE LIAS RES	

PET HORS RESPONDING .YES' BY SELECTED GRPS

GPSUNP PAGE 14

PERCENT MEMBERS PERFORMING

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DY-TSK	DO TOU USE OR REFER TO THE SENERAL	TENTERATURE CAN AFFECT THE OFFRATION OF DIODES 1-09 DO YOU IDENTIFY SENIGONOUCTOR DIODES AS OPPOSED OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASE	THEIR PRISICAL AFFEARANCE LID DO YOU REFER TO OR YOU DETERMINE THE GENERAL FEFFERS OF DODING ON CHERRY F. DM	1-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORMARD	DO YOU USE OR REFER TO DIODE COLOR CODING	DO YOU USE OR REFER TO CRNTRIFUEAL FORCE OF	USE OR REFER TO CENTRIPETAL FORCE OF		NO 350	8:		1-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A	1-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS	AT CHEST OF REFER TO FORBIDDEN ENERGY LEVELS OF	THE PROPERTY OF REFER TO VALENCE ELECTRONS (THOSE	1-23 DO TOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMB	1-24 DO YOU USE OR REFER TO STABOLS ON THE DIGDE WHICH	INDICATE THE CATHODE END	CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON	THE PRESENCE OFFICIENCY OF RESISTANCE (AS TEAPERATOR INCREMENTS OF RESISTANCE (AS TEAPERATOR INCREMENTS)	1-27 DO TOU USE OF REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES, SUCH AS VOLTAGE - CURRENT	CHARACTERISTIC CURVES (PERHAPS YOU DO THIS TO IDENTIF	1-28 DO 100 DEFERMINE MMETHER FN JUNCTION DIODES ARE ENGINEERO BIASED ON REVERSE BIASED MHEN YOU READ OR ENGINEER TISELET TO SELVENTEER BIASED MHEN YOU READ OR	GI-29 DO YOU USE OF REPER TO VALENCE SAND IN SEMICONDUCTOR

176 177 178 179 160 161 162	0 0 0 7 1	0 0 4 8 0 0	1 2 0 4 0 0 0	2 3 1 7 0 0 0	7 7 8 12 11 0 3	2 3 0 6 2 0 0	2 3 0 4 0 6 5	16 14 19 25 11 9 0		2 3 0 7 0 0 0	0 0 0 6 2	2 2 1 6 0 0 0	35 34 36 46 41 24 17	0 0 0 1 0 1 0	24 22 27 29 23 20 3	9 10 5 12 9 7 0	10 12 7 13 11 9 0	9 11 5 12 11 0 0	12 12 12 19 14 6 0	74 75 70 72	76 52 52 47	17 60 99	48 43 58 63 39 43 20
01-18K	1 383 61-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN			6 386 61-33 DO TOU USE OR REPER TO ELECTRON-MOLE PAIR CREATED IN	6 387 61-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN	STATE CONDITIONS OF REFER TO DONOR INFURITY IN	G 180 GILLS DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN	6 390 \$1-37 DO TOU USE OR REPER TO P-TYPE SEMICOMOUCTOR MATERIAL 5 391 \$1-38 DO TOU USE OR REPER TO MAJORITY CARRIERS IN	SENICONDUCTORS GI-40 DO YOU USE OR REFER TO	SERICONDUCTORS 6 1944 61-41 DO TOU USE OR REFER TO JUNCTION RECOMBINATION IN	6 345 GI-42 DO YOU USE OR REFER TO DEPLETION REGION IN	6 396 61-45 DO TOU USE OR REPER TO RELATIONSHIP BETWEEN BARRIER			G 399 GI-46 DO TOU USE ON REFER TO DIODE SUBSTITUTION	G 400 61-47 DG TOU USE OR REFER TO MAXIMUM AVERAGE FORMAND	-	6 402 61-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIDDE	G 403 61-50 00 YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE	62-01 DO YOU WORK W	404 62-03 DO YOU REHOVE	408 62-05 DO YOU US	G 409 62-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS

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TASK GROUP SURMANY PERCENT MEMBERS PERFORMING

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5PC SPC SPC SPC SPC SPC SPC 174 177 178 180 181 182	48 43 58 65 39 39 23	15 14 15 22 7 11 13	14 14 14 22 5 9 13	33 29 39 46 23 20 33	12 13 11 24 7 9 3	68 67 70 74 59 69 54 69 66 74 75 55 69 69	30 29 32 41 18 30 7	17 14 18 26 14 15 10	24 23 26 34 18 22 10	12 7 16 5 9	0 , 0 , 1	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	. 2 5!	2 2 0 2 2 0 2 2 0 0 2 2 0 0 0 0 0 0 0 0	2	55 51 61 72 41 40 37	37 40	41 59 63 34 35 37	32 49 62 20 19	46 57 72 39 37	38 32 51 62 20 20 20		7 8 5 12 2 6 0	
DY-75K		411 42-09 DO TOU USE OR REFER TO HOW BIASING AFFECTS THE PATHISTON DAMES MINISTED OF THE PATHISTS . BASE JUNCTION	OU USE OR REPER	TOU USE OR REFER	3	3 00 700 0	417 42-14 DO VOU USE OR REFER TO TRANSISTOR SUBSTITUTION	THE 62-15 DO TOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IS 18 NORMALLY SIGNIFICANTLY SHALLER THAN THE EMITTER CURRENT IE (USUALLY IS BEING 2 TO	3	420 62-17 DO 70U	50 100 C	6 422 62-19 DO YOU USE OF REFER TO BETA TRANSISTOR GAINS	424 62-21 DO TOU USE OR REFER TO	426 62-22 DO TOU CALCULATE BETA TRANSISTOR GAINS	62-24 DO TOU C	PRESENT JOB	424 63402 50 YOU INSTRUCT TAANSISTOR AND INTERS	431 63-04 DO YOU T	432 63-05 DO TOU TROUBLESHOOT TO AMPLIFIER COMPONENTS	433 63-06 00 70U REHOVE	A 434 63-07 DO TOU MENOVE ON REPLACE AND LIFTER COMPONENTS	COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN BASE	436 43-04 DO YOU USE OR REFER TO (COMMON ENITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A SPECIFIC CHANGE IN BASE CURRENT	

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TASK GROUP SUMMARY PERFORMING

		3.	245	170		180	26.	2 P.C	
•	GD=10 DG TOU USE ON REFER TO (COMMON EXITTER) THE CHANGE IN COLLECTION VOLTAGE MILCH RESULTS FROM A CHANGE IN BASE CLUBERY	•	•	•	*		•	0	
•	CALCULATIONS NECESSARY TO NEASURE THE SPECIFIC CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A SPECIFIC CHANGE IN MAKE CHANGE IN	•	•	u	0	~		0	
3		15	<u></u>	•	5.4	1	1.3	m	
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:	TRANSISTORS USING A FORMULA THAT 15, DO YOU DIVIDE THE CHANGE IN DASE CHRENT INTO THE CHANGE IN COLLECTOR	•	•	n	^	0	~	D	
;	CONTENT OF CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA THAT IS, DO YOU MULTIPLY THE CURRENT GAIN TIMES THE VOLTAGE GAIN TO DETERMINE THE POWER GAIN	m	~	-	•	o	74	0	
450	G3-23 GO YOU REED TO KNOW THAT HORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS TEMPERATURE INCREASES ITHIS AFFECTS THE STATIC OPERATING POINT EGG OF	un.	un .	•	•	~		0	
	GALET DESCRIPTE THE STATIC OPERATING POINT EGG OF A TRANSLETOR AT DIFFERENT TEMPERATURES	-	7	0	•	0	~	0	
152	THE ACTUAL CIRCUITY THE	1.1		•	8	=	=	0	
÷ 5.	G3-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-BIAS STABILIZATION	5	1.5	•	52	=	_	0	

PCT MORS RESPONDING .YES' BY SELECTED GRPS

GPSUMP PAGE 18

PERCE	TASK GROUP SUNMANY PERCENT MEMBERS PERFORNING							
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*		•	:	2	5	:	=	•
6 457	•	13	2	=	2.1	~	1	0
. 45.	DOUGHE DIODE STABILIZATION # 63-41 DO TOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS ###################################	2.1	30	53	*	*	2	0
	•	20	1.1	27	34	*	•	o
**		21	•	5.8	3.8	-	2	0
:	63-34 DO YOU TROUBLESHOOT	54	-	32	38	*	1.5	•
7	•	52	-	32	97	=	1.5	•
:		1.7	5	30	28	•	•	0
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:	8 63-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE	2	13	1.5	3.1		•	0
:		•	•	**	3.4	*	•	6
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6 •71	CONTINUENTION 163-4 DO YOU DEFENINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	=	=	12	•	•	•	0
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6 475	CIRCUITS 5 63-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED	1.5	17	20	22	=	•	~

PET MBAS RESPONDING .TES. BY SELECTED GAPS
TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

CPSUNT PAGE 19

FO SPC	0 2 5 6 0 7	47 30 41 39 46	28 38 40 39 15	36 38 41 13		*1 50 17	44 50 17	57 57 31	3	2 57 33	1 52 5	00		11	1.1	39		•										•	5	5.	70		*		-	0	0	,	•		
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S N N N N N N N N N N N N N N N N N N N	SI MENER DO YOU MAYE THE OFFICE OF REPLACING ONE TIPE OF	12-28 DO YOU WORK WITH CIRCUITS MAICH EXPLOY	H2-27 DO YOU WORK WITH CIRCUITS	HZ-Z6 DO YOU WORK WITH CIRCUITS	INPUT L-TYPE FILTERS	H2-25 DO TOU MORK WITH	HZ-Z4 DO YOU WORK WITH CIRCUITS	FILTERS	FILTERS H2-23 OD YOU MORK WITH CIRCUITS	H2-22 DO YOU WORK WITH CIRCUITS	HATTO DO YOU USE OR REFER TO EFF	12-21 DO YOU USE OR PEFER TO SEE	42-20 DO TOU USE OR REFER TO SHA	H2-19 DO YOU USE OR REFER TO PEA	42-18 DO 700 USE OR REFER TO RIP	HZ-17 DO YOU USE OR REFER TO RIPPLE	34 01 100 03E 08 MEFER 10 44E	HZ-15 DO TOU USE ON REPER TO PEA	HZ-14 DO YOU USE OR REFER TO INP	H2-13 DO TOU USE OR REFER TO INP	HZ-12 DO YOU HORK WITH THREE-PHA	HZELL DO YOU MORK WITH ARIDES BE	MZ-10 DO TOU MORK WITH FULL-MAVE	DO TOU WORK WITH HALF-WAVE RECTIFIERS	DO TOU REMOVE OR REPLACE P	DO TOU REHOVE OR REPLACE C	DO YOU TROUBLESHOOT TO POWER	DO TOU TROUBLESHOOT TO POWER	DO YOU ALIEN OR ADJUST POWER	DO YOU CLEAN POWER SUPPLIE	DO YOU INSPECT POWER SUPPL	IN YOUR PRESENT JOB, DO YO	DO TOU USE OR REFER TO INT	DO YOU USE OR REFER TO ZEN	DO TOU USE OR REFER TO UNI	DO TOU USE OR REFER TO FIE	DO YOU USE OR REFER TO TUN	DO YOU USE OR REFER TO VAR	IFIERS		784 - 70

PET NORS RESPONDING .YES' BY SELECTED GRPS

GPSUNT PAGE 20

TASK GROUP SURMARY PERCENT MEMBERS PERFORMING

5	PERCENT MEMBERS PERFORMING	25	ERFORMING								
				300	245	SPC	246	SPC	SPC	SPC	
			01-15K	17.	111	178			•	1.5	
3	3 H3-02 BO	100	INSPECT OSCILLATORS	?	?	*	7	-	11	13	
	H3-03		ALIEN OR ADJUST OSCILLATORS	9	-	38	2.5		5	0	
	S H3-04 00	40	REMOVE OR REPLACE COMPLETE OSCILLATORS	45	* 5	-	• 5	52	•	13	
	13-05			*	34	*	53	58	-	0	
. 617	#3-0+		TROUBLESHOOT TO OSCILLATOR	42	•	4	2.4	**	20	10	
	H3-07			**	33	35	9.5	20		0	
H 510	-	400	USE OR REFER TO FEEDBACK	33	33	*	•	*	-	10	
H 520	H3-0+		USE OR REFER TO FREQUENCY DETERMINING DEVICES	20	35	28	:	34	9 -		
H 15	(600)		The same state of the same sta								
	43-10		USE OR REFER TO	27	27	37	*	32	- 2	3	
# 522	700	100	USE OR REFER TO	31	32	-	0	4 00	-	01	
	13-12		USE OR REFER TO	31	21	23	11	34	1	•	
	2:5		USE OR REFER TO	29	29	30	*	1 1	-	10	
25 E	#7-F		USE OR REFER TO	9	1.2	1		=	•	0	
	#3-18		USE OR REFER TO	01	~	1	- 5	-	•	0	
# 827	H3-14		USE OR REFER TO	12	=	=	•	-	•	0	
	73	100	USE OR REFER TO OVER DAMPING	12	?	-	1 9	-	•	0	
H 52	I	100		7	22	20	34	27	1	1	
	CIRCUITS	S 45									
H 530		100	MORK WITH OSCILLATORS WHICH USE RC NETWORKS AS	30	58	34	*	45	•	-	
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. 53		100	HORK HITH OSCILLATORS WHICH USE CRISTALS AS	75	•	78	26	06	=	•	
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776		2	HITH OSCILLATORS WHICH USE	-	*	•		=		•	
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-		1000	TOWN THE SENIES WANTER STRONGER	2		-	•	07		0	
. 634	1		MORE MITH SAUNT MADTLEY STRUSDED OSTILLATORS	12	1.2	13		33	*	•	
525		100	MORK WITH	1 2		2	2.1	20	•	9 0	
	177		MORK WITH	01	=	•	5	20	7	0	
. 537	#3-24		MORK WITH		•	1	13		2	0	
1 55	I	100	#0RK #17H	52	27	23	32	36	=	11	
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	20-11	3	COUNTY OF STREET OF STREET OF STREET OF STREET			5 .	;	•	2	- :	
			ALIES ON ADDOS! MAYE SEAFABILISE OF	;	*	2	?	;	-		
1 542	12 11-04 00 YOU	400		23	25	:	34	23	-	1	
1 543	11.05	00 100	TROUBLESHOOT TO MAVE GENERATING OR SHAPING	*	*	35		36	•	1.	
	CIRCU					17					
1 544	-	405	TOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING	7.	29	7.	40	32	-	1	
248	S 11-07 00 700 AEMO		TOU REMOVE OR REPLACE COMPLETE WAVE GENERATING OR	32	29	38	7	32	-	20	
		20	11-08 DO TOU REHOVE ON REPLACE MAVE GENERATING OR SHAPING	28	29	26	7	30	17	-	
		HTS						,		,	
1 647	=	400	WORK WITH MULTIVIBRATORS MHICH CONTAIN LC TANK	22	5 4	•	32	27	-	•	
	CIRCUIT	•									

MULTIVIBRATORS

PCT HBRS RESPONDING .VES' BY SELECTED GRPS TASK GROUP SUMMARY PERCENT HEMBERS PERFORMING

GPSUNG PAGE 21

										LIMITERS AND	CLAMPERS										SI SCIBON TIBES	EL EL IRUN 10BES																			
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The state of the s	1 548 11-10 DO YOU WORK WITH HULTIVIBRATORS HHICH CONTAIN RC	1 549 11-11 DO YOU WORK WITH MULTIVIDRATORS WHICH CONTAIN	I 550 11-12 DO YOU MORK WITH HULTIVIBRATORS WHICH CONTAIN DON'T	IBER WHICH TYPE OF F	11-13 DO TOU HORK WITH AS	100 TOUR WITH TO	SECTION OF THE PROPERTY OF THE PROPERTY OF THE PARTY OF T	MULTIVIBRATORS	00 400	WORK WITH SE	NO YOU WORK WITH SH	12-04 DO 700 HORK WITH LI	MORK WITH ZE	DO TOU MORK WITH TR	12-07 DO YOU WORK WITH DO	12-08 DO YOU WORK WITH BASIC	TOU WORK WITH DI	CIRCUIT		CONTAINS ELECTRON TUBES	13-02 DO YOU CHEC	13-03 00 100 USE 108E 1ES	וז-04 00 100 056 אחרוושנ	1 570 13-06 DO YOU USE SUBSTITUTION TO CHECK ELECTION TURES	13-07 BO YOU USE OR REFE	13-00 00 YOU USE OR REF	13-09 DO TOU USE ON REPER TO	13-10 00 YOU USE OR REF	13-11 DO 700 USE OR REF	13-12 bd 100 USE ON RET	COMPLET TO DE TENTE RESISTE	RESISTANCE FOR FLECTRON 1	O TOU USE OR REFER TO	13-16 DO YOU USE OR REFER TO	13-17 DO YOU USE OR REFER TO	13-18 DO YOU USE OR REFER TO	IN-IP DO TOU USE OR REFER TO	TOO OSE OF MEPER TO	OR CTHE AMPLIFICATION	110 OF CHANGE IN PLAT	VOLTAGE)

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-	FASK GROUP SUMMARY PERCENT NEMBERS PLRFORMIN
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PCT MBRS RESPONDING .YES' BY SELECTED	ALC: POR

	04-15K	SPC 176	177	17.	360	50	3.0	36	
-	Sat 13-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE	-	-	0	-	~	•	0	
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_	CALLED AC PLATE RESIDIANCE 591 13-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE	7	•	0	•	0	7	0	
_	RESISTANCE 592 13-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE	•	*	-	1	~	~	o	
-	DO YOU	-	*	0	•	0	0	0	
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	STREET TO THE SATURATION STREET TO ELECTRON THE AMPLIFIER GAIN STREET TO ELECTRON THE AMPLIFIER GAIN	25	ž.:	••	32	27	* ~	00	
-	16 VCY	11	30	22	;	57	•	0	
-		20	20	•	3.2		•	0	
_	602 13-38 DO YOU USE OSCILLOSCOPES TO DETERHINE ELECTRON TUBE	20	•	22	5.6	45	•	0	
-		*	•	-	•	5	7	0	
-	55		7	0		0	0	0	
	AS INPUT CAPACITANCE	•		;	0		-	•	
_	13-42 DO YOU USE OR REFER TO PIN	\$:	. 2	:	82	•	0	
_	607 13-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL OR THE OPERATING THREADY THE EMITTING SURFACE IN THE RESERVENT OF FERETRON THERE YOU NOW NOT THE	-	s.	0	•	•	~	0	
-		•	72	-	52	25	0	0	
1	DO YOU WORK WI	37	37	3.6	9.5	7,3	•	0	ELECTRON TUB
2	ERS	•	•	•	13		•	0	AND CIRCUITS

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T MBRS RESPONDING . TES' BY SELECTED GRPS	ASK GROUP SURMARY
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CPSUNO PAGE 23

	•	;							-
DY-75K	1.3	11.	-						
U 611 JI-03 DO YOU TROUBLESMOOT ON REPAIR PARAPHASE AMPLIFIERS	5.5	1:	=:	**	0:	~:	00		
SIS JI-05 DO YOU TROUBLESHOOT OR REPAIR	2 ~	::		; :	200		00		
AMPLIFIERS		12.7.							
J 614 JI-06 DO TOU TROUBLESHOOT OR REPAIR CASCADE-CORNECTED	\$	•	•	54	13		0		
J 615 JI-07 DO TOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE	:	-	-	3.8	30		0		
OF AMPLIFIER		1					-		-
J 616 J2-01 DO TOU MORK MITH GAS TUBES (HOT CATHODE OF COLD	*	27	54	-	57	•	0		
1 617 J2-G2 DO YOU WORK WITH CATHODE-RAY TUBES	27	35	•	;	50	•	0		
410 J2-03 00 YOU	•	•	0	•	w	0	0	ELECTRON TUBES	
J 619 J2-09 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM	•	•	•	•	•	0	0		
POWER TUBES ARE USED	-	9	:	4		-			
TAYBABONS		2			6	,			
J 621 J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH	• 1	7.	•	2.1	57	*	0		
THYRATRONS ARE USED									
-		15	20	58			a		-
ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)			:	35		,			
ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES				6,	•		9		
J 624 JZ-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF		15	1.6	25	9	2	0		
MOSIATIC DEFLECTION STSTEMS OF									
. A25 .12=10 Do You Use of Beers to PunSPHOR SCREENS	9.	13		3.6		2			
J2-11 DO TOU USE OR REFER TO	•	. 00				2	0 0		
627 J2-12 DO TOU USE OR REFER TO	1	1	1		s	7	, 0		
628 J2-13 00 TOU USE OR REFER TO	•1	15		32	-	*	0		
J2-14 00 700 USE OR REFER TO	13		*	25	*	*	0		-
32-15 DO TOU USE OR REFER TO	10	=	0	54	7	7	0		
A 631 J2-16 DO TOU USE ON REFER TO PHOSPHORESCENCE	-3			22	0 0	7 00	0	The same of the control of the contr	1
PRESENT JOB		;			,	,			
U 635 L3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	39	;	30	69	20	22	3	HETERODYNING,	
634 J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS	5	55	42	72	80	3.8	~	MODULATION, AND	
YOU USE OR REFER TO THE HETERO	52	*	30	*	45	-	6	DEMODULATION	
IN TOUR MORK MITH TRANSMIT OR RECEIVE									
J3-05 DO TOU PERFORM TASKS ON REACT	53		*	37	32	.3	0		
637 J3-06 DO TOU PERFORM TASKS ON MODULATED OSCILLATORS	-	-	27	57	50	20	1	The state of the s	1
200	•	٠		10	•		0		
KI-02 DO YOU	•	•	'n	•	•		0	AM SYSTEMS	_
640 KI-03 DO YOU CLEAN AN TRANSMIT OR RECEIVE SYSTEMS	•	•	7	1	0	7	0		
K 641 KI-04 DO YOU ALIGN OR ADJUST AN TRANSMIT OR RECEIVE SYSTEMS	s	•	*	1	•	•	0		

Pet HBRS RESPONDING .YES. BY SELECTED GRPS

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GPSUNT PAGE

FM SYSTEMS 3PC 000000000 0 00000000 0 -= --20 0 0 0 0 20 20 20 350 0 0 2000 ; -50 7 36 24 53 53 50 20 222 34 30 30 52 32 20 30 27 378 28 23 OU PERFORM TASKS ON RF OSCILLATORS
OU PERFORM TASKS ON RF AMPLIFIERS
OU PERFORM TASKS ON AUDIO AMPLIFIERS
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OU PERFORM TASKS ON DETECTORS OR REFER TO SELECTIVITY OF RECEIVERS
OR REFER TO SELECTIVITY OF REGEIVERS
ON REFER TO SANDRASS DISTORTION
OR REFER TO SAUARE LAW DISTORTION
OR REFER TO CO-CHANNEL INTERFRUCE
OR REFER TO INAGE FREQUENCIES IN RECEIVERS
ON REFER TO SIGNAL TO INAGE RATIOS OR DO YOU TROUBLESHOOT TO AN TRANSMIT ON RECEIVE SYSTEMS DO YOU TROUBLESHOOT TO AN TRANSMIT OR RECEIVE ASS KI-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTER SCHEMATIC DIAGRAMS
665 KI-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AN K 664 KI-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM ARECEIVER SCHEMATIC DIAGRAMS

666 K2-01 DO TOU MORK WITH FM TRANSHIT ON RECEIVE STSTEMS
TOUR PRESENT JOB

667 K2-02 DO TOU INSPECT FM TRANSHIT OR RECEIVE STSTEMS
669 K2-03 DO TOU CLEAN FM TRANSHIT OR RECEIVE STSTEMS
669 K2-04 DO TOU CLEAN FM TRANSHIT OR RECEIVE STSTEMS
670 K2-05 DO TOU LEAN FM TRANSHIT OR RECEIVE K 672 K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT ON RECEIVE COMPONENTS
K 644 KI-D7 DO YOU RENOVE OR REPLACE AN TRANSMIT OR RECEIVE K2-08 DO TOU REHOVE OR REPLACE FM TRANSMIT OR RECEIVE 645 KI-DB DD TOU REMOVE OR REPLACE AN TRANSMIT OR RECEIVE COMPONENTS
R 674 K2-09 DO YOU PENFORM TASKS ON AUDIO AMPLIFIERS
K 678 K2-10 DO YOU PENFORM TASKS ON FREQUENCY MULTIPLIERS K 671 K2-06 DO YOU TROUBLESHOOT TO FM TRANSHIT OR RECEIVE DY-15K KI-20 DO TOU USE OR REFER KI-21 DO TOU USE OR REFER KI-23 DO TOU USE OR REFER KI-25 DO TOU USE OR REFER KI-25 DO TOU USE OR REFER KI-26 DO TOU USE OR REFER IMAGE REJECTION RATIOS TASK GROUP SUMMARY PERCENT MENBERS PERFORMING TOU PERFORM TOU PERFORM TOU PERFORM PERFORM ## KI-19 00 700 USE ## KI-21 00 700 USE ## KI-21 00 700 USE ## KI-21 00 700 USE ## KI-22 00 700 USE ## KI-23 00 700 USE ## KI-25 00 700 USE KI-25 00 TOU USE K 666 K2-01 K .73

TASK GROUP SURMARY PERCENT MEMBERS PERFORMING

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TASK GROUP SURMARY PERCENT MEMBERS PERFORMING

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TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING

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TASK GROUP SUMMARY PERCENT MENDERS PERFORMING

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TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING

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TASK GROUP SURMARY PERCENT MEMBERS PERFORMING

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DY-TSK	N 825 N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS N 824 N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT MAYERORMS ACROSS REACTOR MINDINGS OR LOAD RESISTORS OF	32		N 829 NEILS OF YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE	N 830 NA-13 DO YOU USE OR REFER TO RESIDUAL MACHETISM IN	SALI NAME OF THE OF THE TO PLUX DENSITY IN SATURABLE	N 832 NE-15 DO YOU USE OF REFER TO POINT OF SATURATION IN	N 813 NZ-15 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC	N 634 NJ-01 DO YOU WORK HITH MAVESHAPING CIRCUITS IN YOUR PRESENT	N3-02 DO YOU USE ON HEFER TO TRANSI	134 N3-03 00 700 USE OR REFER TO PULSE MIDTH (PM)		839 N3-06 DO YOU USE OR REFER	TOU USE OR REFER TO INTE	N 641 NO-DG DO YOU USE ON REPENTO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG. MEDIUM, OR SHORT	ETHER AN	AND OUTFUT CONFIGURATION	N3-11 00	D 845 01-01 DO TOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR		847 01-03 DO YOU CLEAN SSB TRANSHIT OR RECEIVE	D BES OLIO TO TOUR TRANSMIT OR RECEIVE STATEMS	SYSTEMS	O 850 OI-06 DO TOU TROUBLESHOOT TO SSB TRANSMIT OF RECEIVE	O 651 01-07 DO TOU REMOVE OR REPLACE 558 TRANSMIT OR RECEIVE	O 852 01-000 DO YOU REMOVE OF REPLACE 558 THANSHIT OR RECEIVE

TASE GROUP SURVEY TENDENS

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01-15K	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Det DIET DO TOT TERFORM TASKS ON 558 FREQUENCY CONVERTERS DES DIEZ DO TOU PERFORM TASKS ON 558 FREQUENCY CONVERTERS DES DIEZ DO TOU PERFORM TASKS ON 558 FR ANTIFIFERS DES DIEZ DO TOU PERFORM TASKS ON 558 DEMODULATORS DES DIEZ DO TOU PERFORM TASKS ON 558 DEMODULATORS	00000	323	01-30 DO YOU TRACE	JOB HORK	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS	02-05 DO YOU TROUBLESHOOT TO PULSE HODULATION ST 02-06 DO YOU TROUBLESHOOT TO PULSE HODULATION ST COMPONENTS	881 02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS 882 02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS	883 02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAH) SYSTEMS 884 02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM)	SASSITION FOL WORK ON PULSE-POSITION HODULATION (PPN)	884 02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS 887 02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS 888 02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM

2	PCT MBRS RESPONDING .TES. BY SELECTED GRPS		•	SPEUM PAGE	7974	32		
	TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING							
	01-TSK	2.5	90C	3 P.C	396	50	345	B -
•	884 02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM	12	2	=	:	:	=	
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•	SOL DO TOU PERFORM TASKS ON	90	7	•	25	34	=	
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•	GOS OR-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM	10	•	:	7.	=	•	
•		•	•	15	17	32	•	
•	895 02-21 DO 70U P	**	52	50	25	;	•	
•	004 02-22 00 400	20	•	50	52	-	=	
•	D 847 02-23 DO FOU PERFORM TASKS ON PULSE MODULATION STREET	1.1	•	51	**	*	•	
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0	404 02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	52	27	20	7:	*	••	
0	906 02-32 00 YOU USE ON REFER TO PULSE	52	27	2 -		7 6	•	
0	ene ozasa no You USE OR REFER TO	24	25	25	74	0 2	=-	
00	909 02-35 DO YOU CALCULATE PULSE	=		::	2.5	53	•	
•	910 02-34	20	7	•	2.	•	•	
•	11 02-37	•	•	•	•	•	•	
•	912 02-38	7	23	•	34	•		
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0	DO TOU WORK WITH ANT	99	17	63	:	-	2	1
0	FIS 03-02 DO YOU INSPECT ANTENNAS	:	20	ī	88	-	;	

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TASK GROUP SUMMANT PERCENT MEMBERS PERFORMING

0v-15k	28C	250	250	3.5		3 =	3 c
TOU CLEAR ANTENNAS	25	::	::	==	::	22	~ ~
TOU ELECTRICALLY ALIGN ANTENNAS	::	==	::3	=:	2:	3:	
TOU TROUBLESHOOT TO ANTENNA COMPONENTS	: :	::	3 .5		:	: :	
REMOVE	\$	-	3		-	=	1
9 8	==	: =	-	62	: :		• •
5 5	0	1.2	s	2	:	•	0
DATABLE AND DETERMINE THE RESERVED OF THE MARKET COMME	•	•	•	•			•
IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS			•	:	•		0
O3-13 GO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNES MAICH ARE OF CORRECT LENGTH (HALF-MAYE) ACT AS INDUCTIVE LOGG TO THE GENERATOR	•	•	•	•	•	•	0
8	•	^	•	2	~	•	0
03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A MALF-WAVE ACT AS CAPACITIVE LOADS TO THE GENERALOW.	•	•	1	5	~	~	0
H11H	•	•	•	=	*	•	0
DO TOU BOAR HITH ARRONN ANTENNAS		= :	- 6	50	=:	~ =	•
TOU WORK WITH	•	•	-	2 5	? ~		o ~
DO YOU WORK WITH CARDIOID ARRAYS	٠ <u>٠</u>	•		0.	~ 2	* -	00
DO YOU USE OF REPER TO THE TERM ELECTRONAGNETIC	•	•	•		~	~	00
INDUCTION FIELDS MAEN WORKING MITH ANTENNAS 03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS	•	•	•		1	~	0
03-24 DO YOU USE OR REFER TO THE TERM ELECTRONAGNETIC	2	1.5	•	•	20	•	0
03-25 DO YOU MEASURE ELECTRONAGNETIC RADIATION	01	13	^	10	25	•	•
FIELDS OF ANTENNAS 03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E)	-	•	-	,	0	~	0
AND MAGMETIC (11) COMPONENTS IN ANTENNA RADIATION 03-27 DO 700 USE OR REFER TO THE TIME PHASE OF ELECTRIC (E)	-	•	-	-	0	~	0
AND MAGNETIC (1) COMPONENTS IN ANTENNA INDUCTION FIELD 03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY	20	1.1	27	*	•	•	0
POLARIZED 03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY	2	•	22	•	~	2	0
03-10 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS	•	•	•	•	•	•	o
03-31 DO YOU COMSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORPECT LENGTH FOR SPECIFIC MAYELFINETH	•	•	-	•	•	~	٥

PET MORS RESPONDING . YES' BY SELECTED GRPS

CPSUMP PAGE 34

PERCENT MEMBERS PERFORMING

	PLACENT ALTONALIAS								
	DY-73K	24°	SPC 177	350	35	300	3.5	300	
-	945 03-32 DO THE ANTENNA ARRAYS YOU HORK HITH CONTAIN PARASITIC	•	•	•	22	•	~	0	
0	CLEMENTS	•	=	•	12	•	~	0	
150	ELENENTS SERVING AS DIRECTORS				:				
0	CAN DUE DE TAM BANKER AND AND TOUR BUTT CONTAIN PARANCE CONTAIN PARANCE CONTAIN SERVICE AND SERVICE AND SERVICES	2	•	•		=	•	•	
		**	5.2	20	*	30	*.	1	
FY	MEMERBER WHAT KIND OF CLEMENTS		,						
	444 03-34 00 70U MORK ON	-	50	•	7	20	=	•	
0	950 03-37 DO YOU WORK ON	2	2	77	•	:	9	•	
0	03-38 DO 100 BORK	•	2	• :	52	=:	-	-	
0	THE PERSON NOT THE PERSON NAMED AND PERSON OF THE PERSON NAMED AND PERSON	:	2		-			-	
200	LINES (TRANSMISSION LINES ARE DEFINED TO					:		•	
	EIVERS AND ANTENNAS, TELEPHONE LEADS,								TDANCHICCI
									LINES
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TO	TRANSMISSION LINES						•		
	CLEBERTS IN TO LEGGE BAIN CONTACTOR THE COLORS	,	•	0	•	0	•	0	
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	DO 700	•	•	•	•	~	•	0	
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	P1-09 00 YOU WORK WITH		~	0	•	• 0		00	
	P1-10 DO YOU NORK WITH	•		•	*	=	•	0	
	LINES PILL DO YOU MOOK WITH DIGIT CO. WILL CLAIM TO. WELL CO.			•			•		
0.00	LINES				2	•			
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C	N LINES	,		,		•	,	-	
	PILIT OF YOU					•	•	•	
	TERRITATIONS TO ACRIEVE DESIRED MANETORNS			•		,	•	•	
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	MEASURE STAND	•	•	•	•	•	~	0	
	TRANSMISSION LINES								
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	3	-	~	0	•	•	•	٥	
	TRANSFORMERS TO MATCH TRANSMISSION L								

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TASK GROUP SUMMARY PERCENT MEMBERS PERFORMING

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NET-10	P 971 PI-19 DO TOU MORK MITH TRANSMISSION LINES WHICH ARE MATCHED		THE S	OF REFER TO	A S	P 974 PI-24 DO YOU USE OR REFER TO THE TERM CUTOFF FREQUENCY OF	P 977 P1-25 DO TOU USE OR REFER TO THE TERM VELOCITY FACTOR (K)	P 978 P1-24 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION	35		REMAIN CONSTANT,	P 981 PI-29 DO TOU WORK MITH NOMRESONANT (FLAT) TRANSMISSION	LINES PI-30 DO YOU WORK MITH RESONANT TRANSMISSION LINES	P 483 F1-51 DO TOU MORK MITH TRANSMISSION LINES AMICH ARE MATCHED TO LOADS USING STUB MATCHING	1 DO TOU WORK WI	POUR PRESENT JOB PS-02 DO TOU INSPECT WAYEGUIDES OR CAVITY RESONATORS	P2-03 DO TOU CLEAN MAVEGUIDES OR CAVITY	TO SEE PRIOR DO YOU BEEN MAKEGUIDES OR CAVITY RESONATORS	PZ-04 DO YOU PRESSURIZE WAVEGUIDES OF CA	TOU PURGE WA	P2-09 DO YOU REHOVE OR INSTALL COMPLETE MAYEGU	TO SEE PRO-10 DO YOU REMOVE OR INSTALL MAYEGUIDE SECTIONS	PZ-12 DO YOU REHOVE OR INSTALL	PZ-13 DO YOU REHOVE OR INSTALL H BENG	P 997 P2-14 DO TOU REMOVE ON INSTALL OTHER BENDS	P2-16 DO YOU REMOVE OR INSTALL ROTATION	PICOO P2-17 GO TOU RESOVE OF INSTALL DIRECTIONAL COUPLESS	P2-19 00 100 USE OR REFER TO "A

TASK GROUP SUMMARY PERCENT HENDERS PERFORMING

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	DY-TSE		386	SPC 177	5PC	395	300	3 PC	50C	
222	72-20 DO YOU USE OR REFER TO "B" MALL OF MAYEGUIDES PR-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF MAYEGUIDES PR-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF	FEUIDES		0.00	***	299	==•	~**	200	
1000	MAYEGUIDES P2-23 DO TOU USE OR REFER TO POWER-DETERMINING MALL	30	•	•	-	•	•	0	0	
1007 72	MAYEGUIDES P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY		•	•	-	•	0	*	0	
1000	P2-25 DO YOU USE OR REFER TO HAGNETIC FIELD BOUNDARY		•	9	-	•	•	*	0	
1000	CONDITIONS PREFER TO DUFLEXER FIELD BOUNDARY		•	s	•	•	so.	2	0	
0101	O THE GENERAL RULE B. WALL SIZE OF	THAT MOST	•	in	•	12	s)	0	0	
101	P2-26 DO YOU USE OR REPER TO THE GENERAL RULE THAT HOST "A" MALLS RANGE FROM .2 TO .5 MAVELENGTHS IN SIZE, MITH .35	4057 "A.	•	*	0	•	•	0	•	
1012 72	PRINCE AND THE RANGE WITH THE MATERIAL (SUCH AS BRASS)	3RASS1	•	,	=	•	1	•	0	
1013 72	THICK MAYEGUIDES AND MADE OF A MAYEGUIDE FOR	SPECIFIC	•	•	•	•	2	•	0	
101	P2-21 DO YOU USE THE RIGHT MAND RULE TO DETERMINE THE OFFECTION OF PROPAGATION, DIRECTION OF SE FIELD, OR NESTEL ON DE PASSENTE	# A A	~	•	٩	1	0	0	۵	
1015 P2		SE OR	4	7	-	•	0	0	0	
1016 72	PARTY OF YOU MEASURE THE TIME PHASE OF "E" OR "HE LINES IN	INES IN	-	2	0	a,	0	0	0	
1017 F2	TAYERDINES OF REFER TO THE SPACE QUADRATURE OF "E" OR	E. 0R	*	•	0	•	0	0	0	
1018 72	PA-15 ARE HOW FORESTORY USED ON MAVEGUIDES OR CAVITY	TILA	0	•	1	12	5-		0	
1019 62	PRESENTIONS TO BOTH WITH PROBES USED ON MAVEGUIDES OR CAVITY BREADLANDS AND LORS LINES USED ON WAVEGUIDES OR CAVITY	411	13	1.3	-	1.8	23	•	•	
1020 62	PRESCRIPTION OF MANY AND OR CAVITY RESONATORS	rows	ıa	•	•	0	•	0	0	
1031	Y W .	5301053	30	12	:	*	30	•	0	
1022 72	OR LAKE THE REMEMBER THE KIND OF ENERGY COUPLING USED ON MANTALES OF ENERGY COUPLING USED	0380 9	52	11	23	•	30	•_		
1023 62	P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN MAYEGUIDES OR CAVITY RESONATORS MITHOUT REFERRING TO	*	•	•	-	•	~	2	•	
	ERMINE THE POSITIONING OF LOOPS IN LAVITY RESONATORS WITHOUT REPERRING	2	~	~	-	•	~	0	0	

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SPC 177	2	•	32	2		œ <u>-</u>		32	80	•	•	• •	•		~	•	5.		-	. 0	35	3.5	•:	: 5		20	-	~ ~	~
300	•		5.	21	01	~ :		**	43	•		• =	•	•	77	•	30	• ~	•	30	36	77	2:	**		20	•	~ ~	~
DY-15K	PIGES P2-42 DG YOU DETERNINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	PLOSE PRESENTE CHOKE JOINTS USED IN MAVEGUIDES OF CAVITY BECOMMENDES VILLED MAN MAY THE	PIGET PRESENTED AND MOTATING JOINTS USED IN MAYEGUIDES OF CAVITY	PIGES P2-45 ARE DON'T REMEMBER THE KIND OF JOINTS USED IN	P2-46 DO TOU TUNE CAVITY RESONATORS	•	P2-49 DO YOU TUNE CAVITY RESONATORS	THE NETWON OF TUNING PLOTS PEAGO OF YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY PERSONATIONS	PIOS4 PS-DI IN TOUR PRESENT JOB DO YOU MORK WITH KLYSTRONS, TRAVELING MAVE TUBES (THT), PARAMETRIC AMPLIFIERS, OR	MAGMETRONS P1035 P3-02 DO YOU USE OR REPER TO INTERELECTRODE CAPACITANCE	P3-03 00 100 USE OR REFER TO	OU USE OR REFER TO	CIRCUITAY PIGSO PICE OF VEYER TO PRINCIPLE OF ELECTRON VELOCITY	P3-07 DO YOU USE OR	P3-08 BO YOU WORK WI	P3-09 DO TOU HORK	-1-10 00 YOU WORK WITH		SESTATIONED AND TOTAL STREET, SESTATIONED PROTECTION OF STREET	P3-14 DO YOU WORK	P3-15 DO 70U INSPE	P3-14 DO YOU CLEAN	PIOSO PASIT DO TOU TUNE RESTRONS OR THE ELECTRICALLY	P3-19 DO 70U	=	PIGSS P3-20 DO YOU TROUBLESHOOT KLYSTRONS OR 187 P1084 P3-21 DO YOU REMOVE OR REPLACE COMPLETE KLYSTRON OR 187	P3-22 DO YOU REHOV	7 P3-24 DO TOU CLEAN	1 P3-25 DO TOU ADJUST

PET MBRS RESPONDING 1765' BY SELECTED GRPS

GPSUMP PAGE 38

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SK GROUP SURENTY

	SPC	SPC	SPC	SPC	36	SPC	SPC	
DI-TSK	***		- 2	17.	•	=	1.82	
1050 P3-20 DO YOU TUNE PARAMETRIC AMPLIFIERS	77	~ ~	~ ~			00	00	
ANPLIFIERS	•	,	•	-	•	•	•	
P3-29 00 TOU	. ~	. ~	, -			• •	0 0	
1063 P3-30 00 YOU RENOVE OR REPLACE PARAMETRIC AMPLIFIER	-	-	-	-	~	0	0	
COMPONENTS								
P3-31 00 70U		•	?;	*	2:	2.	0	
CONTRACT TO THE TANK TANK TO THE TANK TO T		**	32	2 :	•	. •	0 0	
P3-34 00 70u	::		23	::	:	•		
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P3-34 DO YOU TROUBLESHOOT HAGNETR	2.	32	22	3.	9	22	0	
5	*	•	ž.	='	5.	3.	0	
63-39 00	•	• •	•		• •	•	o c	
THO-CAYITY KLYSTRONS COLLECTOR PLATES			•		•		,	
1073 P3-40 BO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF	~	7	-	•	•	•	0	
1074 P3-41 DO YOU USE OR REPER TO THE OPERATING PRINCIPLES OF	7	~	-	•	0	•	•	
TWO-CAVITY KLYST								
1075 THE BO TOU USE OR REFER TO THE OFFERATIVE PRINCIPLES OF	•	•	-	•	~	•	•	
1076 P3-43-90 YOU USE OR REPER TO THE OPERATING PRINCIPLES OF	-	~	0	-	0	0	0	
TWO-CAVITY KLYST	•		•			•		
TWO-CAVITY KLYSTROMS BUNCHER GRIDS	•	•	•	-	•	•	0	
	-	-	•	-	•	0	0	
TRO-CAVITY RETSTRONS BUNCHER CAVITIES 1079 PD-46 DG YOU US: OR REFER TO THE OPERATING PRINCIPLES OF	•	•	-	•	•	•	•	
THO-CAVITY KLYST							,	
1000 P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF	•	1	-	-	•	•	0	
OR REFER	.1	•	•	52	:	,	•	
	-15	•	2	=	:	•	•	
DOSS P3-50 DO YOU USE ON REPER TO THE OPERATING PRINCIPLES OF	•	•		12	•	•	•	
REFLEX KLYSTRON GRID CAVITY			•	:		•		
1084 P3-81 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF	=	-	- 5	52	•	•	,	
USE OR REFER	•	•	•	•	~	•	-	
IDSE PA-63 DO YOU USE OR REPER TO THE OPERATING PRINCIPLES OF	2	12	=	•	20	•	-	
REFLEX KLYSTRON FILAMENTS		•	:					
1087 73-84 BO 100 USE OR REPER TO THE OPERATING PRINCIPLES OF REPLEX KLYSTRON CATHODES	2	_	:	7	•	•	•	

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TASK GROUP SURMARY PERCENT MEMBERS PERFORMING

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245	•				0	0	•	•	-	•		•	=	-		:	5 -		•				1	7	1	-	2.	•	27	•		•	25	=:	22	200		7	•	77
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07-75K	TIZIG TZ-25 DO TOU MORK WITH MALF SILVERED 1928 AEFLECTIVE!	TIRIT TE-26 DO YOU WORK WITH MELICAL FLASHTUBES	12-28 OF YOU WORK -111	12-29 DO YOU WORK WITH H	72-30 80 700 WORK WITH X	12-31 DO YOU WORK WITH C	7 72-32 00 YOU WORK WITH A	12-33 00 10U WORK WITH N	72-34 DO TOU WORK WITH GALLIU	11220 11-01 12 TOUR PRESENT JOB DO TOU KORK MITH DISPLAY TUBES.	STORAGE TUBES (MMST)	13-02 DO 700	DO YOU ELEAN DYST OR MMST	TO-04 DO 100 POCUET OR CALIBRATE DVST OR HIST		CIRCUITS	TIZZE T3-07 DO YOU REMOVE OR REPLACE DVST OR MMST TUBES FROM	MAJOR ASSEMBLIES OR UNITS	TOU PERFORM TASK	THE VARIOUS ELEMENTS OF DAST	THE VARIOUS ELEMENTS OF MAST	13-10 DO YOU PERFORM TAS	T3-11 DO TOU PERFORM TASKS ON	T3-12 DO TOU PERFORM TASKS	13-13 DO TOU PERFORM TASKS ON	DO YOU PERFORM TASKS ON	UI-UI IN TOUR PRESENT	USES UT-02 DO YOU USE OF BEFER TO DECIMAL SYSTEMS	UI-03 DO YOU USE OR REFER TO PROGRAMS	U1-04 DO YOU USE OR REFER TO	UI-05 DO YOU USE OR REFER TO	UI-06 DO YOU USE OR REFER TO	U1-07 DO YOU USE OR REFER TO	01-08 00 YOU USE OR REFER TO	UI-09 DO YOU USE OF REFER TO	COLUMN COLUMN CON COLUMN CON COLUMN C	UI-12 DO YOU USE OR REFER TO	. U1-13 00 TOU USE OR REFER TO	UI-14 DO TOU PERFORM TASKS ON	405

PCT MBRS RESPONDING .TES' BY SELECTED GRPS

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PERCENT HENDERS PERFORNING

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-14 00 YOU PERFORM TASKS ON IMPUT DEVICES	20	20	22	90	=	•	0	
-17 DO YOU PERFORM TASKS ON STORAGE DEVICES	20	20	22	53		0	0	
-18 DO TOU PERFORM TASKS ON ARITHMETIC SECTIONS	20	7	=	•	•	0	0	
-19 DO TOU PERFORM TASKS ON CONTROL SECTIONS	=	7.1	77	24	=	0	0	
-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES	77	21	77	25	-	0	0	
-21 DO YOU PERFORM TASKS ON POWER SUPPLIES	22	717	23	2.3	*	0	0	
UIZES UZ-DI DO TOU USE DECIDELS TO EXPRESS AMPLIFICATION AND	;	3	**	:	:	35	1	
-02 DO TOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN	•	0.	•	2		•	0	D DB AND POWER
-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN	•	0.	•	11 61 4 01 0	=	•	0	201103
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AIR FORCE OCCUPATIONAL MEASUREMENT CENTER LACKLAND A--ETC F/G 5/9
AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALIST AFSC 3--ETC(U)
SEP 77 T J O'CONNOR, E J WEBER

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This report summarizes the results of the administration of the Electronic Principles Inventory to airmen assigned as Avionic Inertial and Radar Navigation Systems Specialist (AFSC 32854). The report gives a detailed listing of the technical tasks and knowledge needed to perform the jobs within the specialty or career ladder.

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This specialty has the following functions:

Installs, maintains, and repairs avionic inertial and radar navigational equipment. Performs preventive maintenance on avionic inertial and radar navigational equipment. Installs avionic inertial and radar navigational equipment. Repairs avionic inertial and radar navigation equipment. Maintains inspection and maintenance records. Supervises avionic inertial and radar navigation systems personnel.